STATISTICAL CLASSIFICATION OF HIGH-SPEED NETWORK DATA THROUGH CONTENT INSPECTION

ABSTRACT OF THE DISCLOSURE

[0091]   A network data classifier statistically classifies received data at wire-speed by examining, in part, the payloads of packets in which such data are disposed and without having a priori knowledge of the classification of the data. The network data classifier includes a feature extractor that extract features from the packets it receives. Such features include, for example, textual or binary patterns within the data or profiling of the network traffic. The network data classifier further includes a statistical classifier that classifies the received data into one or more pre-defined categories using the numerical values representing the features extracted by the feature extractor. The statistical classifier may generate a probability distribution function for each of a multitude of classes for the received data. The data so classified are subsequently be processed by a policy engine. Depending on the policies, different categories may be treated differently.

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